

## CLAIMS

1. A gear checking apparatus comprising:

a master gear having a plurality of gear teeth formed on an outer periphery thereof;

5 said master gear having a first complement of full effective face width teeth formed on said outer periphery of said gear and a second full complement of teeth formed on a diametrically opposite portion of said outer periphery of said gear; and

10 said master gear having formed between said full complements of teeth a complement of half face width teeth formed on one side of said master gear at the outer periphery thereof and also having formed between said full complements of teeth a second complement of half face width teeth formed on the opposite side of said master gear at the outer periphery thereof.

2. A gear check apparatus comprising:

a master gear having an outer periphery;

a plurality of sections of teeth having a full face width about said outer periphery;

5 a first set of teeth formed from one edge of said outer periphery to an intermediate portion of said outer periphery and extending about said outer periphery from at least one of said sections of full face width teeth;

10 a second set of teeth formed on a portion of said outer periphery non-coincidental with said first set of and extending about said outer periphery from at least another of said sections of full face width teeth in a direction opposite said second set of teeth.

3. The gear check apparatus defined in Claim 2 further comprising:

- said master gear having a second set of full face width teeth;  
 said second and third set of teeth extending from an outer edge of  
 5 said outer periphery to a central location of said outer periphery and being  
 formed on said outer periphery at substantially diametrically opposite  
 locations; and  
 each of said second and third sets of teeth extending between said  
 first and second sets of full face width teeth.

4. The gear check apparatus defined in Claim 2 further wherein:  
 a third set of teeth is formed from another edge of said outer  
 periphery to an intermediate portion of said outer periphery non-coincident  
 with either said first or second set of teeth and extending about said outer  
 5 periphery from at least one of said sections of full face width teeth

5. A method of checking a production gear comprising the steps  
 of:  
 providing a master gear having at least three gear sections formed  
 thereon with a first of said gear sections being a complement of full face  
 5 width teeth, a second section of said gear having a complement of less than  
 full face width teeth, and a third section of said gear having a complement of  
 less than full face width teeth formed thereon;  
 meshing said master gear with a production gear at said full face  
 width complement of teeth; and  
 10 rotating said master gear to drive said production gear through at  
 least two revolutions of tooth mesh.